EIA/CEG also asserts that subscribers who "opt out" of cable -- and who, presumably, "opt in" for alternate video distribution methods like DBS or MMDS -- will unnecessarily have to pay for the ANSI/EIA 563.x Decoder Interface Connector if it is required on every television set. See EIA/CEG Comments at p. 33, n. 48. However, DBS, MMDS and LMDS (28 GHz) technologies, like cable, generally will not send multiple "clear" channels directly into a subscriber's TV or VCR; a Decoder Interface Connector equipped TV or VCR would not, therefore, be a meaningless investment for the non-cable consumer.

In summary, NCTA believes that the cable industry has provided both the Commission and the electronics industry with a workable proposal for consideration, one which includes a commitment from both cable and the electronics manufacturers. The ANSI/EIA 563.x Decoder Interface Connector, a key element in the cable industry proposal, would allow a TV and VCR to utilize its own tuner, thus solving many of the compatibility problems cited by the legislation. Incorporating this technology into a "cable ready" or "cable compatible" set would be a significant step forward in fulfilling Section 17's mandate to the Commission.

V. Solutions Already Exist for Many Remote Control Compatibility Problems.

The electronics industry comments also address several issues regarding remote controls. First, the EIA/CEC Comments suggest that the Commission should "forbid"

[illegible]

that end, the NCTA Comments proposed that any equipment labelled as "cable ready" or "cable compatible" should be able to fully function without a set-top descrambler/converter. See NCTA Comments at p. 21.[33/]

Further, the cable industry agrees with electronics manufacturers that Section 17 does not mandate the manufacture of "cable ready" products, only the truthful marketing of TVs and VCRs that meet a true "cable ready" standard. EIA/CEG, however, does not address what should make a TV or VCR "cable ready" or "cable compatible." In contrast, the cable industry has presented concrete and detailed proposals about what a "cable ready" or "cable compatible" TV or VCR should look like. See NCTA Comments at pp. 20 - 25.[34/] Moreover, while the electronics industry dislikes an "expansive" definition of "cable-ready," cable

operational and performance parameters of a TV or VCR that will qualify it as cable ready.

Finally, NCTA reiterates its strong support for a rule that allows only truly compatible TVs or VCRs to tune cable channels. As a consequence, all non-compatible TVs and VCRs should be restricted to tuning broadcast channels only. The Commission must also realize that other phrases, euphemisms and trade practices can be equally confusing and deceptive to the hopeful customer purchasing a supposedly cable friendly TV or VCR. If electronics manufacturers and retailers wish to tout their products as compatible with cable, they should deliver what they promise.

Conclusion

The Commission should ignore demands to allocate the heaviest burden of complying with Section 17 on cable operators. Furthermore, calls to halt, even temporarily, the development of new services or products from either industry should be rejected. In evaluating the information submitted in this proceeding, NCTA urges the Commission to focus on what can be done to improve compatibility in the near-term between cable security techniques and advanced consumer electronics features. The cable industry is not willing to write off the existing base of TVs and VCRs and

urges the Commission not to lose sight of today's problems as it considers tomorrow's issues

CERTIFICATE OF SERVICE

This will certify that an original and nine copies of the foregoing Comments were delivered by hand this 21st day of April, 1993, to the following:

Office of the Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

Michael J. Pierce

April 21, 1993

EXHIBIT 1

EIA IS-6

EIA INTERIM STANDARD

JOINT EIA/NCTA
RECOMMENDED CABLE TELEVISION
CHANNEL IDENTIFICATION PLAN

IS-6 (CP)

(Consumer Products)

MAY 1983

Engineering Department

ELECTRONIC INDUSTRIES ASSOCIATION

NOTICE

EIA Engineering Standards and Publications are designed to serve the public interest through eliminating misunderstandings between manufacturers and purchasers, facilitating interchangeability and improvement of products, and assisting the purchaser in selecting and obtaining with minimum delay the proper product for his particular need. Existence of such Standards and Publications shall not in any respect preclude any member or non-member of EIA from manufacturing or selling products not conforming to such Standards and Publications, nor shall the existence of such Standards and Publications preclude

INTERIM STANDARD NO. 6 -- RECOMMENDED CABLE TELEVISION IDENTIFICATION PLAN

DISSENTING STATEMENT

GENERAL ELECTRIC IS COMMITTED TO PRODUCING AND DISTRIBUTING TELEVISION AND VIDEO PRODUCTS WHICH PROVIDE CUSTOMER SATISFACTION UNDER A WIDE VARIETY OF OPERATING CONDITIONS. CONSEQUENTLY, FM REJECTION TRAPS ARE INCORPORTED INTO MOST PRODUCTS AS AN INTEGRAL PART OF THE TUNER.

ACCORDINGLY, WE PETITION THAT THE FOLLOWING BE CONSIDERED DURING THE REVIEW PROCESS WHICH WILL PRECEED THE ISSUANCE OF THE PERMANENT STANDARD;

A) SECTION 2.6 (CHANNEL PRIORITY): EXPAND THE EXCLUDED CATV USAGE FOR THE BROADCAST FM SPECTRUM (SEE SUBPART 3) TO INCLUDE ALL TRANSMITTED MATERIAL WHICH WOULD CUSTOMARILY INVOLVE THE SUBSCRIBER'S TELEVISION RECEIVER, OR EQUIVALENT, E.G., FULL-FIELD TELETEXT.

B) SECTION 2.7 (CHANNEL CAPACITY): EXCLUDE THOSE CHANNELS WHICH FALL WITHIN THE BROADCAST FM BAND FROM THE CHANNEL COUNT NUMBER "N". THIS CHANGE IS LOGICALLY CONSISTANT WITH THE INTENT OF SECTION 2.6 (CHANNEL PRIORITY), SUBPART 3. THE INVOLVED, AND EXCLUDED CHANNELS, ARE NUMBERED 95 - 97 IN THE STANDARD.

F.R. STACHOWIAK 4-26-83
GENERAL ELECTRIC COMPANY

EIA INTERIM STANDARD No. 6

RECOMMENDED CABLE TELEVISION CHANNEL IDENTIFICATION PLAN

Prepared by:

EIA/NCTA Joint Engineering Committee
Channelization Working Group

EIA INTERIM STANDARD No. 6

RECOMMENDED CABLE TELEVISION CHANNEL IDENTIFICATION PLAN

TABLE OF CONTENTS

EIA INTERIM STANDARD NO. 6 (CP)

RECOMMENDED CABLE TELEVISION CHANNEL IDENTIFICATION PLAN

1.0 INTRODUCTION

In January of 1982 the Electronic Industries Association (EIA) and the National Cable Television Association (NCTA) formed a Joint Engineering Committee to make an assessment of the problems related to the compatibility of cable hardware and television receivers, with emphasis on the technical and operational issues at stake. The charter of the committee is "To establish and maintain dialogue between the cable and consumer electronics industries for the purpose of studying and resolving engineering matters of common interest."

The main concern of the EIA/NCTA Joint Engineering Committee is communications, cooperation and, where necessary, the generation of guidelines to steer development of cable television services and consumer equipment into the future, in a way which will facilitate adaptation to new services and techniques.

It is important to recognize that there is no disagreement on the need to achieve certain minimum levels of compatibility. Both the system operator and receiver manufacturers are interested in satisfying their customer needs. The problem lies in determining those needs and then ensuring that most of them are met without undue disruption to the needs of others. Orderly development by both parties requires compatibility between the television receiver and the cable systems, which can be achieved through the EIA/NCTA Joint Engineering Committee's efforts in defining interfaces.

2.0 CHANNEL IDENTIFICATION PLAN

2.1 Definitions of Terms - General

Note: Within the scope of this Plan, the following definitions shall apply.

2.1.1 Standard Frequencies

This is a cable transmission system that transmits on the standard off-air frequencies for the channels 2-6 and 7-13. Supplemental channels are in 6 MHz increments down from channel 7 (175.25 MHz) to 91.25 MHz (channels 14-22 and 95-99) and upwards from channel 13 (211.25 MHz).

2.1.2 Harmonic Related Carriers

This is a cable transmission system that transmits on picture carrier frequencies that are multiples of 6MHz and starts at 54 MHz. It involves frequency displacements of -1.25 MHz on all standard and supplementary channels except channels 5 and 6, where the displacement is +0.75 MHz.

2.1.3 Incremental Related Carriers

This is a cable transmission system that transmits on picture carrier frequencies starting at 55.25 MHz and increments each channel by 6 MHz. The result is the same as Standard Frequencies with the exception of the channels between 67.25 MHz and 91.25 MHz.

2.2 Numbering

The numbers 1 through 99 designate the channels on a CATV cable, and the channel selected. The single digit channel numbers may be designated by a preceeding zero if desired (i.e., 7 or 07). The manner by which multiple cables are accomodated is undefined by this Plan.

2.3 Frequency Assignments

This Plan defines Standard, IRC and HRC channels as depicted in Table 1 and Table 2.

2.4 Frequency Tolerances

The maximum allowable frequency offset for any channel shall be ± 300 kHz of the nominal frequency. Furthermore, the spacing between adjacent picture carriers shall be 6 ± .125 MHz.

2.5 Minimum Number of Channels

The minimum number of channels, for compliance with this Plan shall be 35 (channel numbers 2-36).

2.6 Channel Priority

* Channel 1 shall be implemented after channels 2-53.

* Once the channels 1-65 are implemented, channels 98-99 must be implemented. Inclusion of channels 98-99 in devices with fewer than the above 65 channels is optional. Channels 98-99 will be implemented jointly.

* Cable channels 95-97 having HRC picture carrier frequencies of 90.0, 96.0 and 102.0 MHz and IRC and

Standard picture carrier frequencies of 91.25, 97.25 and 103.25 MHz are being named in this plan to complete the available spectrum. Compliance with this Channel Identification Plan does not require that these channels be included. Therefore, utilization of these channels by a cable system is on a voluntary basis and recommended signal carriage is for services other than those involving transmission of a picture (standard or scrambled) to a customer. Many television receivers currently on the market and compatible units to be produced in the near future contain traps to attenuate the FM band, thereby greatly reducing a source of crossmodulation and intermodulation interference to TV. Inclusion of these traps inhibits the reception of these channels.

2.7 Channel Capacity

In compliance with this Plan, the number of cable channels capable of being received shall be indicated as N(C) where N indicates the total number of channels, and C indicates the channel numbers.

Examples: 52(2-51,98,99)

52(2-53)

55(1-55)

75(1-73,98,99)

Table 1

CHANNEL IDENTIFICATION PLAN

(By Channel Designation)

Channel Designation	Pix Carrier Frequency (MHz)			Historical Reference
	Std.	HRC	IRC	
1,01	*	72.00	73.25	4+,A-8
2,02	55.25	54.00	55.25	
3,03	61.25	60.00	61.25	
4,04	67.25	66.00	67.25	
5,05	77.25	78.00	79.25	A-7(HRC,IRC)
6,06	83.25	84.00	85.25	A-6(HRC,IRC)
7,07	175.25	174.00	175.25	
.	.	.	.	
.	.	.	.	
.	.	.	.	
13	211.25	210.00	211.25	
14	121.25	120.00	121.25	A
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
22	169.25	168.00	169.25	I
23	217.25	216.00	217.25	J
.	.	.	.	.
.	.	.	.	.
30	259.25	258.00	259.25	Q
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
40	319.25	318.00	319.25	DD
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
50	379.25	378.00	379.25	NN
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
60	439.25	438.00	439.25	XX
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
70	499.25	498.00	499.25	
.	.	.	.	
.	.	.	.	
.	.	.	.	

* Undesignated

Table 1 (Cont)

CHANNEL IDENTIFICATION PLAN

(By Channel Designation)

Channel Designation	Pix Carrier Frequency (MHz)			Historical Reference
	Std.	HRC	IRC	
80	559.25	558.00	559.25	
.	.	.	.	
.	.	.	.	
.	.	.	.	
90	619.25	618.00	619.25	
.	.	.	.	
.	.	.	.	
.	.	.	.	
94	643.25	642.00	643.25	
95	91.25	90.00	91.25	A-5
96	97.25	96.00	97.25	A-4
97	103.25	102.00	103.25	A-3
98	109.25	108.00	109.25	A-2
99	115.25	114.00	115.25	A-1

Table 2

CHANNEL IDENTIFICATION PLAN

(By Frequency Assignments)

Pix Carrier Frequency (MHz)			Channel Designation	Historical Reference
Std.	HRC	IRC		
55.25	54.00	55.25	2	
61.25	60.00	61.25	3	
67.25	66.00	67.25	4	
*	72.00	73.25	1	4+,A-8
77.25	78.00	79.25	5	A-7(HRC,IRC)
83.25	84.00	85.25	6?	A-6(HRC,IRC)
91.25	90.00	91.25	95	A-5
97.25	96.00	97.25	96	A-4
103.25	102.00	103.25	97	A-3
109.25	108.00	109.25	98	A-2
115.25	114.00	115.25	99	A-1
121.25	120.00	121.25	14	A
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
169.25	168.00	169.25	22	I
175.25	174.00	175.25	7	
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
211.25	210.00	211.25	13	
217.25	216.00	217.25	23	J
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
295.25	294.00	295.25	36	W
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
325.25	324.00	325.25	41	EE
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
397.25	396.00	397.25	53	QQ
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.

*Undesignated

Table 2 (Cont.)

CHANNEL IDENTIFICATION PLAN

(By Frequency Assignments)

Pix Carrier Frequency (MHz)			Channel Designation	Historical Reference
Std.	HRC	IRC		
445.25	444.00	445.25	61	
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
493.25	492.00	493.25	69	
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
547.25	546.00	547.25	78	
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
595.25	594.00	595.25	86	
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
643.25	642.00	643.25	94	


ELECTRONIC INDUSTRIES ASSOCIATION
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EXHIBIT 2

Percentage of Cable Systems with Channel Capacities of 30 Channels or More